

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCT

To:
WELICHEM BIOTECH INC.
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CANADA

INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

22 SEP 2004

REGISTERED MAIL

Applicant's or agent's file reference
PCT-03-01

Date of mailing
(day/month/year) **11/08/2003**

PAYMENT DUE within **45** ~~months~~ days
from the above date of mailing

International application No.
PCT/CA 03/ 00380

International filing date
(day/month/year) **18/03/2003**

Applicant

WELICHEM BIOTECH INC.

1. This International Searching Authority

- (i) considers that there are 03 (number of) inventions claimed in the international application covered by the claims indicated ~~below~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~below~~ on the extra sheet:

- (ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:
1-7 (all in part)

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby invited, within the time limit indicated above, to pay the amount indicated below:

EUR 945,00 x 02 = EUR 1.890,00
Fee per additional invention number of additional inventions total amount of additional fees

Or, _____ x _____ = _____

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☐ Claim(s) Nos. _____ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



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Authorized officer

Sandrine Polenzani

1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:

- 1-7
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 12543 A (CHEN GENHUI ; LI JIANXIONG (CA); WEBSTER JOHN MALCOLM (CA)) 18 March 1999 (1999-03-18) cited in the application Claims 1, 3-4, 10, 13, 16; compounds XN0, XN1, XN3; Table on p. 12 Figure 1	1-7
X	CELMER, WALTER D. ET AL: "A common hydrolysis product of thiolutin and aureothricin" ANTIBIOTICS ANN. 1953-54, PROC. SYMPOSIUM ANTIBIOTICS (WASH., D.C.), 1953, pages 622-625, XP009011765 Compounds (X) and (XI); p. 623, l. 9-15	1-7
X	GB 2 173 499 A (ICI PLC) 15 October 1986 (1986-10-15) Claims 1, 4-6; formula (I); Table I, compounds 4-5, 12, 16, 22; example 1	1,6
X	PATENT ABSTRACTS OF JAPAN vol. 012, no. 358 (C-531), 26 September 1988 (1988-09-26) & JP 63 112586 A (NIPPON KAYAKU CO LTD), 17 May 1988 (1988-05-17) Formula (VI) abstract	1,6
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

**Annex to Form PCT/ISA/206
COMMUNICATION RELATING TO THE RESULTS
OF THE PARTIAL INTERNATIONAL SEARCH**

International Application No
PCT/CA 03/00380

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 94 28001 A (SMITHKLINE BEECHAM PLC ;BAGGALEY KEITH HOWARD (GB); BROOM NIGEL JO) 8 December 1994 (1994-12-08) Claims 1-2; formula (I) -----	1,6
P,X	LAMARI L. ET AL.: "New Dithiolopyrrolone Antibiotics from Saccharothrix sp. SA 233. I. Taxonomy, Fermentation, Isolation and Biological Activities" J. ANTIBIOTICS, vol. 55, no. 8, 2002, pages 696-701, XP009011640 Compounds 1 and 2 -----	1,6

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-7 (all in part)

Dithiolopyrrolone derivatives substituted in 6-position by an (unsaturated hydrocarbon)carbonyl-amine and their use as antiproliferative agents

2. Claims: 1-7 (all in part)

6-Amido-dithiolopyrrolone derivatives substituted in 4-position by a cyclic moiety and their use as antiproliferative agents

3. Claims: 8-10

6-Dimethylaminodithiolopyrrolone derivatives and their use as antiproliferative agents

The unique common concept linking together the subject-matters of claims 1-10 is the presence of a 6-amino-1,2-dithiolo-4,3-b!pyrrol-5(4H)-one core structure, said compounds being useful as antiproliferative agents. Such a structural feature is already disclosed in W099/12543 (see claim 1, XN0, XN1 and XN3) for compounds which exhibit the same activity, i.e. antineoplastic agents. Since the common feature is not novel, it cannot represent the single inventive concept which could have linked the different claimed subject-matters together. All the other elements disclosed in the various general formulas are varying. Thus no common structural element could be found.

The technical relationship between the different subject-matters of claims 1-10 required by rules 13.1 PCT is lacking and the requirement for unity of invention referred to in Article 17.3(a) PCT is not fulfilled.

In view of the said prior art, the problem underlying the present application may be considered as the provision of further dithiolopyrrolone derivatives useful as therapeutic agents in the treatment of proliferative diseases.

The contributions claimed in the present application which are possibly made over the prior art are :

(a) claims 1-7 (all in part) : Dithiolopyrrolone derivatives substituted in 6-position by an (unsaturated hydrocarbon)carbonyl-amine and their use as antiproliferative agents

(b) claims 1-7 (all in part) : 6-Amido-dithiolopyrrolone derivatives substituted in 4-position by a cyclic moiety and their use as antiproliferative agents

(c) claims 8-10 : 6-Dimethylaminodithiolopyrrolone derivatives and their use as antiproliferative agents

The application relates to a plurality of inventions, or groups of inventions, in the sense of Rule 13.1 PCT. They have been divided as defined above. If the applicant pays additional fees for one (or more) not yet searched group(s) of invention(s), then the further search(es) may reveal further prior art that gives evidence of a further lack of unity 'a posteriori' within one (or more) of the not yet searched group(s). In such a case only the first invention in this (each of these) group(s) of inventions, which is considered to lack unity of invention, will be the subject of a search.

No further invitation to pay further additional fees will be issued. This is because Article 17(3)(a) PCT stipulates that the ISA shall establish the International Search Report on those parts of the international application which relate to the invention first mentioned in the claims ('main invention') and for those parts which relate to inventions in respect of which the additional fees were paid. Neither the PCT nor the PCT guidelines provide a legal basis for further invitations to pay further additional search fees (W17/00, point 11 and W1/97, points 11-16).

Patent Family Annex

Information on patent family members

International Application No

PCT/CA 03/00380

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9912543	A	18-03-1999	CA 2212237 A1	05-03-1999
			AU 759990 B2	01-05-2003
			AU 9057098 A	29-03-1999
			WO 9912543 A1	18-03-1999
			CN 1360891 A	31-07-2002
			CN 1276723 T	13-12-2000
			EP 1009401 A1	21-06-2000
			JP 2001515861 T	25-09-2001
GB 2173499	A	15-10-1986	AU 5245986 A	07-08-1986
			DE 3602148 A1	07-08-1986
			FR 2590573 A1	29-05-1987
			JP 61183290 A	15-08-1986
			ZA 8600175 A	29-10-1986
JP 63112586	A	17-05-1988	NONE	
WO 9428001	A	08-12-1994	AU 6928294 A	20-12-1994
			WO 9428001 A1	08-12-1994
			EP 0699203 A1	06-03-1996
			JP 8510265 T	29-10-1996
			ZA 9403452 A	16-05-1995